EC2 Instance

Kensium POS uses Amazon's EC2 instances to host the POS server software for Cloud tenants. A single server can support multiple organizations through the use of *multi-tenancy* – each organization gets its own cloud tenant on the server.

As EC2 instances are typically shared by multiple organizations, the installation steps should be tracked in a separate checklist. The installation steps are not tracked in a specific organization's install checklist.

To create a new EC2 instance, use the AWS console web interface. Ensure that the console is pointing to the correct AWS region.

Before You Begin

Use the EC2-TEMPLATE.xlsx template to create a new checklist to document the instance. The checklist should be saved to the Kensium Sharepoint folder. The final filename of the checklist should be the instance name that you specify in step f.

a. AWS Region

Enter the AWS Region and Availability Zone that will host the EC2 instance.

b. Choose AMI

Select Microsoft Windows Server 2022 Base.

c. Instance Type

Determine and select the instance type of the EC2 instance. Generally this is one of the following types, selected by estimated workload:

- t3.medium
- t3.large
- t3.xlarge

At a later date we may choose to use m5n and a1 instances. EC2 instances that are dedicated to a single client may be a t3.small or even t3.micro instance type.

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Determining instance types is an ongoing process. It's important to monitor server performance to track client usage requirements and performance of the POS system for each client; with this understanding it will be easier to determine instance size for the clients that will be hosted on a particular EC2 instance.

d. Instance Details

Review the Virtual Private Cloud documentation, as the concepts it describes are necessary to understand how the EC2 instance communicates with other POS services.

Use the default instance details, except for the following:

- Network: set to VPC-POS.
- Subnet: set to the public subnet of the primary availability zone of the region, e.g. SN-POS-PUB-2C. This will make the server visible from the internet.
- Auto-assign public IP: Disable. We'll use elastic IPs instead.

The remaining options can use the default settings.

e. Add Storage

You can accept the default storage options.

f. Add Tags

Add a Name tag to add a name to the EC2 instance.

- If the instance will host Kensium POS, follow the format EC-POS-01.
- Replace the number portion to make it unique *across all AWS regions.*
- The name must be unique across all AWS regions, as we will create a DNS entry for the instance.

g. Configure Security Group

Add the following security groups:

- default

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- SG-POS-OPS to allow Kensium operations personnel to access the server
- SG-POS-WEB to enable the public internet to access the server

h. Review and Launch

Review and launch the EC2 instance.

You'll be asked to choose a Key pair. Choose the KEY-POS key pair.

> The KEY-POS key pair is saved to the Kensium password manager. Do not store this file elsewhere, or communicate it via email or other messaging.

i. Add Elastic IP

Add a new Elastic IP address. Add a Name tag:

- The name should reflect the EC2 instance that it will be attached to.
- In other words, follow the format IP-POS-01.
- Replace the number so that it matches the EC2 instance name.
- For example, IP-POS-01 will be attached to EC-POS-01.

After the Elastic IP is created, use the Associate action on the Elastic IP to link it to the EC2 instance created above.

Record the IP address for the EC2 instance. This will be used for each client tenant that is created on the POS server hosted by the instance.

j. Add DNS Record

Add a new DNS A record for the instance:

- Follow the format POS01.fusionPOS.com.
- Replace the number so that it matches the EC2 instance name.
- For example, POS01.fusionPOS.com should point to the IP address of EC-POS-01.

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k. Record Credentials

Use the AWS console to obtain the Windows password for the EC2 instance. This password will be used to connect to the instance via Windows Remote Desktop (RDP).

Record an entry into the Kensium password manager:

- The entry name should follow the pattern InstanceName – RDP.
- For example, EC-POS-01 – RDP.
- Record the username and password.
- Record the URL of the site in the URL field, e.g. https://POS01.fusionPOS.com.
- Save the record to the Production Operations collection in the Kensium organization.

> Always use the Kensium password manager to access RDP credentials. Do not store or transmit these in files, email or other communications.

l. Special Instructions

If the EC2 instance should be configured differently than the norm, enter any special instructions in this field.

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